

Instructions for Supplemental Permit Application Form
VOLATILE LIQUID STORAGE
(Instructions for completing Form No. DEP-AIR-APP-204)

All applicants for a permit for a stationary source, as defined in Section 22a-174-1 of the Regulations of Connecticut State Agencies (RCSA), must complete the appropriate supplemental application forms to provide information to quantify the emissions from each source or point of emissions which makes up that stationary source.

This supplemental application form must be completed for new or modified sources such as storage tank farms, or new or modified storage tanks within an existing source such as a tank farm, which store volatile liquids, e.g., gasoline, benzene, ammonia, etc. A tank farm refers to any premise with any individual storage vessel containing liquids or gases with a capacity equal to or greater than 40,000 gallons.

Please complete a separate form for each premise or tank farm. (Reproduce this form as necessary.) Complete each item as appropriate. If a particular item does not apply to your situation mark it N/A (not applicable). If additional space is needed to answer a question stated in the application, attach separate sheet(s) as necessary, clearly identifying the applicant name, form name and item number, and unit number.

Attach a process flow diagram indicating all units, air pollution control equipment and stacks, as applicable. See a sample process flow diagram in the main instructions (DEP-AIR-INST-200) for guidance. Note: In lieu of completing this form, the output from EPA Tank 3.0 Program may be attached. Also, for each product stored, you must attach a Material Safety Data Sheet (MSDS). (These are available from the product's supplier or are shipped with the product when it is purchased.)

You must also complete the Air Pollution Control Equipment form (DEP-AIR-APP-210) to provide details of the air pollution control equipment used, the Stack Parameters form (DEP-AIR-APP-211) to provide parameters of the stack(s) associated with each unit, *and* the Unit Emissions form (DEP-AIR-APP-212) to provide emission rates of each unit.

Note: The data provided in these forms (such as maximum anticipated throughput, etc.) will be used to define the operating limits in your permit.

Unit Number: Identify the reference or unit number assigned to the premise or tank farm. Use the same numbering system that was used in completing Part I: Application Type of the form **Permit Application for New Source Review Stationary Sources of Air Pollution** (DEP-AIR-APP-200). Please use a consistent reference number for each premise or tank farm throughout the application package. Please complete a separate form for each premise or tank farm.

Indicate (**AYes@** or **ANo@**) whether the premise or tank farm is subject to Title 40 of the Code of Federal Regulations (CFR) Part 60, New Source Performance Standards (NSPS) or Title 40 CFR Part 63, Maximum Achievable Control Technology (MACT). If the answer is yes to either Part 60 or Part 63, please specify the appropriate subparts.

Indicate ("Yes" or "No") if the output from the latest revision of the EPA Tank Software Program is attached.

Section I: Product Information

- 1a. *Tank ID No.*: Assign a reference number to each tank which makes up the tank farm. Base this reference number on the same numbering system that was used in completing Part I: Application Type of the form "Permit *Application* for New Source Review Stationary Sources of Air Pollution" (DEP-AIR-APP-200). For example, if the number assigned to the tank farm is U1, the tanks which make up this particular tank farm would be U1a, U1b, etc. Use separate rows to identify each tank. Enter the number in the Tank ID number column (1a).
- 1b. *Product Type* - List all the products stored (e.g., premium gasoline, acetone, xylene, etc.) in the new or modified tank farm, or new tank, as applicable. *Attach a Material Safety Data Sheet (MSDS) for each product stored.* (These are available from the product's supplier or are shipped with the product when it is purchased.) If more than one product is stored in one tank, use separate *rows* to identify each product. If additional space is needed to complete this item, attach a separate sheet as necessary, clearly identifying the applicant name, unit number, form name and item number.
- 1c. *Density* - Indicate the density, in pounds per gallon, of *each* product. This information can be obtained from the MSDS or the supplier.
- 1d. *Molecular Weight* - Indicate each product's molecular weight. *This* information can be obtained from the MSDS, the supplier, or from standard reference texts.
- 1e,f. *True Vapor Pressure* - Indicate each product's true *vapor* pressure, in psi, at maximum storage temperature *and* annual average storage temperature, i.e., the ambient temperature at which the product is stored. True vapor pressures can be obtained from the MSDS or from standard reference texts. Please note: the color of

the tank increases the storage temperature of an outdoor tank above ambient temperature by 2.5 °F for aluminum colored paint, 3.5 °F for gray paint, 5 °F for black paint, and 0 °F for white paint. If the storage temperatures at the tank site are not known, ambient temperature data from the nearest local weather station may be used as an approximation.

Section II: Bulk Gasoline Plants and Terminals Only

1. *Bulk Gasoline Plant or Terminal?* - Check the appropriate box to indicate whether the tank farm is a bulk gasoline plant or terminal. Note: if the incoming gasoline is received by tank truck, trailer, or other non-marine vessel, the farm is a bulk gasoline *plant*. If the incoming gasoline is received by pipeline, barge, or marine tank, the farm is a bulk gasoline *terminal*.
2. *Loading Incoming Gasoline* - Indicate ("Yes" or "No") whether the listed methods are used to *load* incoming gasoline into the storage tanks. Submerged fill pipe means any fill pipe whose discharge opening is still entirely submerged when the pipe normally used to withdraw liquid from the storage tank can no longer withdraw any liquid. Bottom fill means that a permanent fill pipe is attached to the storage tank bottom. Splash fill means that the fill pipe dispensing the liquid is lowered only partway into the storage tank.
3. *Vapor Balance System?* - A vapor balance system is defined in RCSA Section 22a-174-20(a)(1). For each filling situation listed, indicate ("Yes" or "No") whether a vapor balance system exists.
- 4a. *Vapor Recovery System?* - A vapor recovery system is defined in RCSA Section 22a-174-20(a)(1). Indicate ("Yes" or "No") whether the bulk gasoline terminal is equipped with a vapor recovery system.

- 4b. *Type of Vapor Control Device* - If the response to #4a is yes, specify the type(s) of vapor control device(s) used by the terminal. Be sure to complete the *Air Pollution Control Equipment form* (DEP-AIR-APP-210) for more detailed information regarding the vapor control device(s).

Section III: Storage Tank Information

Part A: All New, Modified or Replacement Storage Tanks

1. *Tank ID No.* - Enter the Tank ID #. Please be sure to use the same number you indicated in Section I.
2. *Construction Date* - List each tank's actual or anticipated construction date. Please refer to the definition of *Actual construction* in RCSCA Section 22a-174-1 in order to properly complete this item.

Note: Information for items #3-5 can be obtained from the tank manufacturer or builder.

3. *Tank Diameter* - Indicate the tank diameter in feet.
4. *Tank Height or Length* - For vertical tanks, indicate the tank height in feet. For horizontal tanks, indicate the tank length in feet.
5. *Maximum Hourly Filling Rate* - Indicate the tank's maximum design filling rate in gallons on an hourly *basis*. This information is a function of the tank's filling hose. If unknown, this information can be obtained from the hose manufacturer.
6. *Maximum Annual Throughput* - For each tank, or product to be stored, estimate the maximum anticipated annual throughput in gallons. Throughput refers to the number of gallons of product delivered to and dispensed from a tank.

7. *Tank Capacity* - Indicate the tank's maximum capacity in gallons. This information is specified by the manufacturer or builder and can often be found on the equipment *nameplate*. If unknown, this information can be obtained from the manufacturer or builder.

Part B: Fixed Roof Tanks Only

1. *Tank ID No.* - Enter the Tank ID #. Please be sure to use the same number you indicated in Section I.
- 2,3. *Paint Color* - List the paint color on the roof and sides of the tank where indicated, e.g., white, aluminum (specular, diffuse), light gray, medium gray, etc.
4. *Average Vapor Space Height* - Indicate the average vapor space height in feet. For most tanks this *value* is equal to one half the tank height. For a cone roof tank, use one-third the height of the cone.
5. *Horizontal or Vertical* - Indicate whether the tank is horizontal ("H") or vertical ("V").
6. *Underground* - Indicate ("Yes" or "No") whether the tank is located underground.

Part C: Variable Vapor Space Tanks Only

These are tanks equipped with expandable vapor reservoirs to accommodate vapor fluctuations attributable to temperature and barometric pressure changes. The two most common types of variable vapor space tanks are lifter roof tanks and flexible diaphragm tanks.

1. *Tank ID No.* - Enter the Tank ID #. Please be sure to use the same number you indicated in Section I.
2. *Volume Expansion Capacity* - Indicate the volume expansion capacity of the variable vapor space, i.e., the volume of the variable vapor space, in gallons, as a result the roof lifting or diaphragm flexing.

3. *Number of Transfers* - Indicate the number of transfers into *the* tank per year.

Part D: All Floating Roof Tanks

1. *Tank ID No.* - Enter the Tank ID #. Please be sure to use the same number you indicated in Section I.
2. *Riveted or Welded* - Indicate whether the tank sides are riveted ("R") or welded ("W").
3. *Type of Primary Seal* - Indicate the type of primary seal, e.g., metallic shoe, liquid or vapor mounted resilient seal, etc.
4. *Type of Secondary Seal* - Indicate the type of secondary seal, e.g., shoe mounted, rim mounted, weather shield, etc.
5. *Shell Condition* - Indicate the tank's shell condition, e.g., light rust, dense rust, gunite lined, etc.
6. *Number of Support Columns* - Indicate the number of support columns for the tank roof. For *external* floating roof tanks, this number is zero. For internal floating roof tanks, this is a function of tank diameter. This information can be obtained from the manufacturer or builder.
7. *Effective Column Diameter* - Indicate the effective column diameter in feet. This value is obtained by dividing the column perimeter in feet by 3.14. (Or you can use 1.1 for 9 inch by 7 inch support columns, 0.7 for 8 inch diameter support columns, or 1.0 if column construction details are not known.)

Part E: Internal Floating Roof Tanks Only

1. *Tank ID No.* - Enter the Tank ID #. Please be *sure* to use the same number you indicated in Section I.
2. *Types of Deck Fittings* - Indicate all types of deck *fittings*, e.g., access hatch, automatic gauge float well, column well, ladder well, roof leg or hanger well, sample pipe or well, drain stub, vacuum breaker, etc.
3. *Number of Each Type* - Indicate the quantity of each type of deck fittings used.
4. *Design of Each Deck Fitting* - Indicate the *design of each* deck fitting, e.g., bolted, gasketed, or sliding cover; fabric sleeve or seal; weighted mechanical activation.
5. *Number of Each Design* - Indicate the quantity of each design of deck fitting.
6. *Length of Deck Seam* - For bolted decks only, indicate the length in feet of the deck seam.